

REMARKS

Claims 1-4 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-4 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

The Examiner alleges that claim 1 is indefinite because the term “clockwise direction” is vague and without a reference point. Notwithstanding, Applicant respectfully asserts that claim 1 is not indefinite because claim 1 recites that the quartz plate has “a side parallel to an X' axis established by rotating the X axis in a clockwise direction about the Z axis within an angle of from about 3 to 30 degrees.” Further, claim 1 recites that “the quartz plate has sides parallel to an X'' axis and a Z'' axis, respectively, which have been rotated within angles of from about -35 to -2 degrees in the clockwise direction about the Y' axis.” Because claim 1 recites that the X' axis is established by rotating the X axis about the Z axis, and that the sides parallel to an X'' and a Z'' axis are rotated about a Y' axis, Applicant respectfully asserts that the reference point about which rotation in the clockwise direction is made is not indefinite. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3, and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over John R. Vig, Technical Report No. SLCET-TR-88-1 ("Vig"). This rejection is respectfully traversed.

Claim 1 has been amended to recite that the quartz plate has sides parallel to an X'' axis and a Z'' axis, respectively, which have been rotated within angles of from about -35 to -2 degrees in the clockwise direction about the Y' axis that is a thickness direction of the cut of the piezoelectric resonator. Rotation about the Y' axis is described at, for example, paragraph [0033] of the specification. No new matter has been added.

Vig does not teach or suggest a quartz plate having sides parallel to an X'' axis and a Z'' axis which have been rotated within angles of from about -35 to -2 degrees in the clockwise direction about the Y' axis that is a thickness direction of the cut of the piezoelectric resonator, as claimed. In contrast, Vig merely teaches a double-rotation piezoelectric oscillator. There is no teaching, suggestion, or motivation in Vig, however, that would lead one skilled in the art to utilize a cut of a piezoelectric actuator having sides parallel to an X'' axis and a Z'' axis which have been rotated within angles of from about -35 to -2 degrees in the clockwise direction about the Y' axis that is a thickness direction of the cut of the piezoelectric resonator. Because this aspect of the claimed invention is neither taught nor suggested, claim 1 and each corresponding dependent claim would not have been obvious in view of Vig.

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang et al (U.S. Pub. No. 2003/0218512 A1). This rejection is respectfully traversed.

The Examiner alleges that the claimed invention is obvious in view of Zhang et al. Notwithstanding, Applicant notes that Zhang only qualifies as prior art under 35 U.S.C. 102(e). Further, Applicant notes that Zhang is commonly owned by Seiko Epson Corporation.

Statement of Common Ownership

Application No. 10/803,480 and U.S. Pat. Pub. No. 2003/0218512 were, at the time the invention of Application No. 10/803,480 was made, commonly owned by Seiko Epson Corporation.

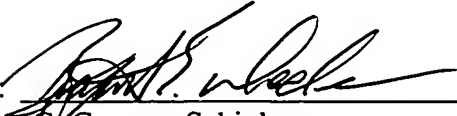
Because the Zhang reference and the present application were commonly owned by Seiko Epson Corporation at the time the invention of the present application was made, Applicant respectfully asserts that the Zhang reference cannot be used in a rejection under 35 U.S.C. 103 against the present application. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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